

CLAIMS

1. A transmitter, comprising:

a network interface unit connected to a wireless network capable of transmitting contents for which copyright protection is necessary;

an encryption processing unit configured to encrypt contents for which copyright protection is necessary;

an RTT measuring unit configured to measure a round trip time after a predetermined packet is transmitted to a receiver, until a response corresponding to the transmitted packet is received;

a communication permission determination unit configured to permit transmission of the contents for which copyright protection is necessary when the round trip time measured by the RTT measuring unit is within a predetermined time; and

a parameter modification unit configured to change parameters of the wireless network before and/or after the RTT measuring unit performs the measurement of the round trip time.

2. The transmitter according to claim 1, further comprising an authentication & key exchange unit configured to perform authentication & key exchange processing with the receiver;

wherein the parameter modification unit changes the parameters to measure the round trip time when the authentication & key exchange unit performs the authentication & key exchange processing, and puts back the parameters after the measurement of the round trip time is completed, before the authentication & key exchange unit completes the authentication & key exchange processing.

3. The transmitter according to claim 1, further comprising an authentication & key exchange unit configured to perform authentication & key exchange processing with the receiver;

wherein the parameter modification unit changes the parameters to measure the round trip time when the authentication & key exchange unit performs the authentication & key exchange

processing, and puts back the parameters after the authentication & key exchange unit completes the authentication & key exchange processing.

4. The transmitter according to claim 1, further comprising an authentication & key exchange unit configured to perform authentication & key exchange processing with the receiver;

wherein the parameter modification unit changes the parameters to measure the round trip time before transmission of commands relating to contents for which copyright protection is necessary is begun, and puts back the parameters after transmission processing of contents for which copyright protection is necessary is completed.

5. The transmitter according to claim 1,

wherein the wireless network is Bluetooth; and

the parameter modification unit changes at least one of a sniff interval expressing transmission and reception interval, a polling interval, transmission power and master-slave exchange prescribed by a standard of Bluetooth as parameters.

6. The transmitter according to claim 5,

wherein the parameter modification unit sets the sniff interval shorter than a normal interval when the RTT measuring unit performs the measurement.

7. The transmitter according to claim 5,

wherein the parameter modification unit sets the polling interval shorter than a normal interval when the RTT measuring unit performs the measurement.

8. The transmitter according to claim 5,

wherein the parameter modification unit sets a transmission power weaker than a normal power when the RTT measuring unit performs the measurement.

9. The transmitter according to claim 5,

wherein the parameter modification unit reverses roles of a master device and a slave device when the RTT measuring unit performs the measurement.

10. A receiver, comprising:

a network interface unit connected to a wireless network capable of receiving contents for which copyright protection is necessary;

an encryption processing unit configured to decrypt contents for which copyright protection is necessary;

an RTT measuring unit configured to measure a round trip time after a predetermined packet is transmitted to a transmitter, until a response corresponding to the transmitted packet is received;

a communication permission determination unit configured to permit reception of contents for which copyright protection is necessary when the round trip time measured by the RTT measuring unit is within a predetermined time; and

a parameter modification unit configured to change parameters of the wireless network before and/or after the RTT measuring unit performs the measurement.

11. The receiver according to claim 10, further comprising an authentication & key exchange unit configured to perform the authentication & key exchange processing with the transmitter,

wherein the parameter modification unit changes the parameters to measure the round trip time when the authentication & key exchange unit performs the authentication & key exchange, and puts back the parameters after the measurement of the round trip time is completed, before the authentication & key exchange unit completes the authentication & key exchange processing.

12. The receiver according to claim 10, further comprising an authentication & key exchange unit configured to perform the authentication & key exchange processing with the transmitter;

wherein the parameter modification unit changes the parameters to measure the round trip time before the authentication & key exchange unit begins the authentication & key exchange processing, and puts back the parameters after the authentication & key exchange unit completes the authentication & key exchange processing.

13. The receiver according to claim 10, further comprising an authentication & key exchange unit configured to perform the authentication & key exchange processing with the transmitter,

wherein the parameter modification unit changes the parameters to measure the round trip time before beginning transmission of commands relating to transmission of contents for which copyright protection is necessary, and puts back the parameters after transmission processing of contents for which copyright protection is necessary is completed.

14. The receiver according to claim 10,

wherein the wireless network is Bluetooth; and

the parameter modification unit changes at least one of a sniff interval expressing transmission and reception interval, a polling interval, transmission power and master-slave exchange prescribed by a standard of Bluetooth as parameters.

15. The receiver according to claim 14,

wherein the parameter modification unit sets the sniff interval shorter than a normal interval when the RTT measuring unit performs the measurement.

16. The receiver according to claim 14,

wherein the parameter modification unit sets the polling interval shorter than a normal interval when the RTT measuring unit performs the measurement.

17. The receiver according to claim 14,

wherein the parameter modification unit sets a transmission

power weaker than a normal power when the RTT measuring unit performs the measurement.

18. The receiver according to claim 14,

wherein the parameter modification unit reverses roles of a master device and a slave device when the RTT measuring unit performs the measurement.

19. A communication control program, comprising:

measuring a round trip time after a predetermined packet is transmitted to the other communication apparatus, until a response corresponding to the transmitted packet is received;

permitting transmission or reception of contents for which copyright protection is necessary when the measured round trip time is within a predetermined time;

transmitting or receiving the encrypted contents via a wireless network when transmission or reception of the contents is permitted; and

changing parameters of the wireless network before and/or after the round trip time is measured.

20. The communication control program according to claim 19,

wherein the wireless network is Bluetooth; and

the parameter modification unit changes at least one of a sniff interval expressing transmission and reception interval, a polling interval, transmission power and master-slave exchange prescribed by a standard of Bluetooth as parameters.